

TWO MYRMECOPHILOUS PHORIDÆ FROM BRITISH GUIANA¹*

By CHARLES T. BRUES

(Fig. 44).

In September, 1920, Mr. William Beebe, director of the Tropical Research Station of the New York Zoological Society at Kartabo, British Guiana, in company with Mr. Alfred Emerson, obtained two remarkable species of Phoridæ along the trails of the legionary ant, *Eciton burchelli*. This ant is abundant in the region of the Station and like the other species of the genus undoubtedly harbors many myrmecophilous insects of various kinds.

On examining the specimens, which they kindly sent me for study, I find that one form represents a new genus, quite different from any of those heretofore described and that the second is identical with a species first made known only a few years ago from Southern Brazil, where it was found with another species of *Eciton* having somewhat similar habits.

As is the case with many of the myrmecophilous Phoridæ, only the wingless or subapterous female of these two species has so far been obtained.

Apterophora gen. nov.

Female.—Wingless, but with the eyes large, half as high as the side of the head; ocelli present; antennæ small, round; palpi simple, with stout bristles at apex; proboscis slender, four times as long as the head-height, geniculate at the middle, with the apical half directed forward. Three transverse series of frontal setæ, the lowest two proclinate, close together; a pair just above these erect or slightly proclinate; upper row of four, two of which are next to the ocelli. Head, seen from above.

¹ Contribution from the entomological laboratory of the Bussey Institution, Harvard University, No. 185.

* Tropical Research Station, Contribution Number 143.

much produced medially in front. Dorsum of thorax somewhat wider than long, no scutellum; a large humeral bristle on each side and a posterior row of stout bristles; pleura oblique, fully twice as high as the length of the dorsum. Abdomen with five very heavily chitinized black dorsal plates which are only slightly separated by pale membrane in engorged specimens; ventral surface membranous, nearly white, without any chitinous plates. Legs rather slender, the anterior coxæ as long as the femora; all tibiæ without preapical spines or bristles.

Type *Apterophora caliginosa* sp. nov.

This is similar to Enderlein's genus *Crepidopachys* (Enderlein '12) from Southern Brazil on account of its long proboscis, but the type of this is a winged insect and it is difficult to make further comparisons. The sex is not given by Enderlein, and if his description should apply to a male, the genus might be related to the present one. I suspect that his examples were females, however, from the description of the apex of the abdomen and particularly the long proboscis, in spite of the fact that the greatly thickened costa suggests that they might be males. Even if the latter should be the case, I do not believe that the two could possibly be congeneric or even closely related, as the long proboscis is the only striking similarity.

Among the genera known to have wingless or subapterous females, two have a similarly lengthened proboscis. *Psyllomyia* Loew (Loew '57, Wassman '00; Brues '01; Schmitz '14) a guest in the nests of *Dorylus helvulus* in South Africa has a long, slender, geniculate proboscis which is, however, not much longer than the head. It has also a dark, heavily chitinized abdomen like *Apterophora*, but the wings are present as large broad pads. The eyes are much smaller, the ocelli absent, and the legs very stout in *Psyllomyia*. In the absence of males, therefore, it seems unwise to regard them as possibly congeneric.

Rhynchomicropteron Annandale (Annandale '12; Schmitz '14 and '15) known by two species, one from Ceylon as a guest of *Lopopelta ocellifera* Rog. and another from Bombay as a guest of *Prenolepis longicornis* Latr., is very similar in some respects to *Apterophora*; it has a very long, slender, geniculate

proboscis and a similarly formed head and thorax. It differs greatly in having well developed digitiform wing pads, in having the ocelli absent, and is practically blind, as the compound eyes are mere vestiges, each composed of half a dozen separate ommatidia. The most striking differences are seen in the abdomen which is entirely membranous, without any clearly chitinized plates, and in the dorsum of the mesothorax which bears a longitudinal impression and distinct median suture, something of very rare occurrence in insects.

Apterophora caliginosa sp. nov.

(Fig. 44).

Female.—Length 1.7-1.9 mm. Head, thorax, abdominal plates, and four posterior coxæ deep, shining black; legs and proboscis honey-yellow; antennæ pale yellow; palpi fuscous; membranous parts of abdomen white, with a slightly sooty tinge. Head distinctly wider and longer than the thorax, the front obtusely triangularly produced between the antennæ, frontal bristles well developed, but not very strong. Eyes oval, contiguous, with the antennal excavation and the posterior margin of the head; cheek one-third the height of the eye, each with a tuft of four or five small bristles anteriorly above the insertion of the palpus, but without bristles behind; postocular bristles weak. Antennæ round, small, with apical, strongly pubescent arista which is one-third longer than the head-height. Proboscis stout at the base, but narrowed and very slender beyond; geniculate just before the middle, the basal part straight, at rest bent somewhat beneath the body and extending to the tip of the front coxæ; apical part curved, projecting forward with the upper margin convex; tip obliquely truncate, with a few minute bristles. Palpi with a few moderately large bristles below near apex. Surface of head impunctate. Mesonotum one-fourth wider than long; anterior margin arcuately excavated, the humeri rounded; spiracles visible from above, just behind the humeri; posterior margin slightly convex. Macrochaetæ not strong, disposed as follows: a weak post-humeral one, a series of six longer ones along the posterior margin, one at each extreme lateral angle and four between these, the

median two farther apart than the others. Surface indistinctly punctate. Abdomen highly convex above, the plates densely and finely punctate; first (visible) one the largest, nearly three times as long and wide as the mesonotum, almost twice as broad behind as in front, the posterior margin nearly straight and fringed with long, bristle-like hairs; second plate only half

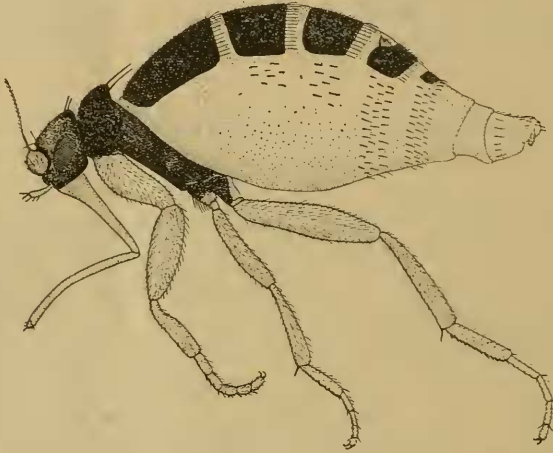


FIG. 44. *APTEROPHORA CALIGINOSA* SP. NOV.

as long as the preceding, but of equal width, similarly punctate and fringed along the posterior margin; third distinctly shorter and narrower, fringed; fourth (really the fifth) segment smaller, the gland opening filling a large anterior emargination of the plate; fifth very small, not fringed like the others; apex of abdomen of the usual tubular, retractile form. All of the abdominal plates clothed with fine, pale, glistening pubescence. Legs slender, although the anterior tibiae are slightly thickened; spurs of four posterior tibiae small, but distinct; hind metatarsi each with seven transverse rows of dense fine recumbent bristles.

Described from two specimens, both the type and paratype, as well as several other specimens which I have not examined, taken at the same time near a trail of the army ant, *Eciton burchelli*, at Kartabo, British Guiana. Concerning their relationship to the ants, Mr. Emerson writes that the first specimen

was seen by Mr. Beebe in the ant trail and that further careful search was rewarded by the finding of several others.

ECITOPHORA COMES SCHMITZ.

Zool. Jahrb. Abth. f. Syst., vol. 36, p. 524 (1914).

Brues, Psyche, vol 30, p. 21 (1923).

Three females from Kartabo, British Guiana taken at the same time that the previous Phorid was obtained, prove to belong to this species.

The types were found with *Eciton predator* Sm. at São Leopoldo, Rio Grande do Sul in southern Brazil, but the Guiana examples agree in all details with Schmitz's description and excellent figures.

It is evident, therefore, that this myrmecophile is widely distributed in tropical South America and that it occurs with at least two species of *Eciton*, *E. burchelli* and *E. predator*.

Ecitophora is much like *Ecitomyia* Brues, with which Schmitz has compared it, and differs in only a few details. In view of the numerous monotypic genera in this group and as Schmitz has already erected the genus *Ecitophora* for this species I have used the name although I am by no means satisfied that the two genera can be maintained. Nevertheless *Ecitophora* is readily separable by the presence of ocelli and the complete absence of the plate on the third abdominal segment, although the minute fourth and fifth plates are fully chitinized and fully colored.

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